Introduction

CalCERTS is keenly interested in supporting all the goals of AB758 and AB32. As a California HERS Provider, CalCERTS realizes that the efforts of AB758, carried out through Energy Upgrade California and other energy efficiency programs can be an industry-building opportunity for HERS Raters. But even more than building the HERS industry, we feel that the important and ambitious goals of AB758 and AB32 must be achieved. CalCERTS, as many others in the community are concerned with energy independence, cleaner air and a more energy efficient environment for future generations. In concert with this conviction, we feel that the HERS Program can provide significant value and capability in achieving the goals. For this reason, we respectfully submit the following suggestions and comments with the knowledge that we will contribute in a positive way toward achievement of the goals.

Summary

1. The word "Assessment" is often used as an attempt to avoid the term "Rating", "Rating Score", or "Rating Index". The term "Assessment" typically is used to provide a *"qualification"* of the features (energy and non-energy), but does not typically include a *quantification* of the amount of benefit in energy and dollars.
2. We feel that Regulations need to support the inclusion of HERS Ratings into any EUC Program or rebate program. But the Regulations should not stop there. The HERS Rating will be more accepted by a wider audience if such things as Point-of-Sale, or prior to listing for sale.
3. We feel that despite the difficulties identified surrounding building simulation software; there has not been a better, more effective, more valuable alternative suggested. Further, we feel that the HERS Lite proposal is, in fact, not a "less detailed, less complicated" version of HERS. HERS Lite is not relevant to what a HERS Rating does. The DOE has described the HEScore as providing a comparison of the target building with a population of buildings nearby. This is not a rating of an individual building, and does not give an assessment of the most cost effective energy features to upgrade.
4. HERS Raters should be brought into the EUC Program designs as well as marketing and outreach efforts from the beginning of the programs.
5. Market Transformation needs to be pointed at the ***whole*** market. The consumer is not the only "market". Contractors, building departments, real estate and lending professionals, utilities and all the stakeholders must be recognized as needing "transformation".
6. We feel that the program should mandate an accredited, uniform and standardized training that helps ensure uniform results statewide.

CalCERTS Response to Agenda Questions

1. What customers are choosing building performance upgrades today? Where are the opportunities for scaling upgrades?

    a. *There is substantial evidence that more informed, better educated consumers are choosing upgrades. While that demographic will tend to have more disposable income, further education and awareness of a broader consumer segment could reach out to more customers for upgrades. This approach might necessarily include some financing options that are palatable and easily accessible.*

2. What value do building assessments bring the homeowner and/or contractor? What should be their role in upgrade programs?

    a. *The information gained by building data can be used DURING the program to analyze and suggest changes to outreach, sales methods, targeted markets and other improvements. But without this information, decisions will be based primarily on anecdotal information.*
    b. *Homeowners benefit from the initial assessment and diagnostics to simply and easily demonstrate not only how the home is performing, but also how the occupants are performing. The assessment addresses energy, health and safety. The initial assessment also provides a "road map", that is, a plan to follow over a longer period of time when finances do not allow for immediate completion of all recommendations.*
    c. *The final assessment at the end helps the homeowner have confidence in the decision to do the upgrade, and in the contractor who performed the work. This is also a time that can be used to reinforce behavior modification training for the homeowner. This reinforces the performance and the asset assessment values in the following way: The asset is improved, so even if the homeowner moves, the asset remains improved. The homeowner is "improved" so if they move, they may do another upgrade, but regardless, they have taken their behavior modification training with them, wherever they go.*
    d. *The assessment provides support to the contractor in two ways: Firstly, when ratings are done in the open market as a leader in the process, the contracting community will find a "ready" market that already has been educated and transformed towards the value of an upgrade. Secondly, at the "kitchen table", the contractor can use his former rating score improvements to help assess scopes, make the sale, and close the job.*
    e. *Ratings can help the Upgrade Program and Utilities as a tool for forecasting energy use and savings; the effectiveness of home owner education of the energy performance; and health and safety issues, along with mechanical unit performance.*

3. What is the role of rebates in efficiency upgrade programs? Can financial products/financing strategies motivate deeper retrofits in lieu of rebates? Are both needed to motivate deeper retrofits?

a. *Rebates have a role, but need to be restructured and may not be enough by themselves. It could be more productive, in terms of energy savings, to use rebates to get more upgrades. Then when the market is accepting updates more readily, use the rebates to get deeper retrofits. Do this in step-wise fashion.*
b. *Follow the CSI/NSHP model of lump sum set aside and tiered rebate rates w/o a cap. The tiers can go down (traditional) or up (to motivate accelerating contractor participation). Additional deeper financing options include scholarships to workforce, direct rebating to homeowner, PACE-style tax rebates.*

4. How can "reactive" interaction with customers (e.g., HVAC tune-ups or water heater replacements) best be leveraged to encourage whole house upgrades? How can such customer interaction encourage or enable future upgrades?

a. *Incentivize the tune-up contractor to provide, with the homeowner's permission, contact information to the EUC program so that the homeowner can be contacted regarding getting a rating and a rebate.*

5. What milestones and metrics are most appropriate for measuring success of programs to motivate upgrade activity? Against what criteria or guiding principles should potential AB758 program initiatives be assessed and prioritized?

a. *Volume of jobs done; net TDV energy saved; total energy saved; money saved; jobs created; carbon reduction; evaluate cost effectiveness of upgrades.*
b. *Measure against the stated goals of AB758; how much demand reduction was achieved?*
c. *Volume of jobs completed vs. volume of sales calls.*

6. How can quality assurance be provided without excessive impact on the customer experience?

b. *First, everyone needs to settle on what "QA", or "QA/QC" actually means. It should have one definition, and then it should be applied in the most judicious way.*
c. *Have only one QA program that addresses ALL stakeholders.*
d. *By having a Rater on the contractor's payroll, as in the HERS Building Performance Contractor model, the Provider's QA can be done in a mentoring format while the work is being performed.*
e. *The Rater could do the QA for the IOU and the IPA and the Provider all in one visit, with data input to the appropriate areas needed.*
f. *Data Registries can perform audits to find suspicious or erroneous entries.*
    i. *Homeowners may indicate their willingness to receive additional field QA or to submit their own billing data for comparison with expected results.*

7. How can Marketing, Education and Outreach efforts leverage and coordinate with other efficiency programs, implementers and regions?

    a. *Marketing messages need to be clear and aligned with the way the work is going to be done. This means that the marketing effort needs to address the role of the contractor, the role of the rater and the role of the health and safety assessor. If the roles change in different regions, then it should be made clear. CPUC should mandate that the programs align statewide in regards to how they interface with EUC, even though there may be regional or service territory differences. While we recognize that some rebate programs may not be based on the "whole house approach', there should be a mechanism to implement them through EUC to maximize consumer and contractor exposure to the EUC Program.*
    b. *Each initiative should provide introductory information to other programs via the contractor. Contractors and raters should be trained about incentive programs during training and receive updates as needed."*

8. What workforce development is desirable for the residential sector?

    a. *The HERS Building Performance Contractor Program fills many of the gaps caused by multiple actors and multiple "touches" on the Homeowner. The workers should have <u>standardized work force knowledge, skills, and attitudes</u>, similar to the four NREL Job Classifications previously developed and sustained by accredited training programs. Home Energy Professionals should all have the same skills that can be taught, measured, assessed and evaluated. This should be accomplished by an accredited program that can ensure the uniformity of workforce skill that will support the uniformity of the EUC Programs.*
    b. *HERS Raters could become "EUC consultants/facilitators" to help maximize rebate participation and minimize home owner and contractor aggravation.*

9. Under what conditions would it be appropriate to include an energy rating in an upgrade project?

    a. *When the program needs to be able to demonstrate savings. This is the best time with the most access to the homeowner, and therefore the data needed.*
    b. *When the program needs to be validated for quality and accuracy.*
    c. *When a "whole house" approach is the program goal, a rating is the best and only solution.*
    d. *The value of an energy rating is not a variable based on conditions, it should be an asset rating for the intrinsic value of the asset, and a performance rating for the value of the energy saved, improvement to home comfort and opportunity to teach occupant behavior basics.*

10. At what other points in the life of a building would an energy rating be desirable?

    a. *At new construction or a major addition.*
    b. *Change of ownership, appraisal, or home inspection; it has been suggested that by requiring a Home Energy Rating before listing or offering for sale, a property, thereby taking it out of the pressure of the sales transaction time.*
    c. *When replacement of a water heater, or HVAC, windows, or whenever any energy feature is being improved or replaced triggers a permit, then a rating should be required.*

11. What market barriers exist that limit the growth of the voluntary market for HERS ratings and assessments? Is there a role for ratepayer or public funding to overcome these barriers, if so, what level is appropriate and commensurate to benefits?

    a. *Lack of perceived value for the score, despite a national movement toward labeling all new homes with a HERS score.*
    b. *Lack of consumer awareness.*
    c. *Lack of contractor acceptance.*
    d. *Cost of ratings.*
    e. *The misconception that there are inconsistent rating models.*
    f. *Better software interfaces that promote speed, accuracy and ease-of-use.*
    g. *Lack of understanding of the CEC's HERS II program*.
    h. *Barriers may be overcome by consistent programs statewide that align with Title 24 codes and the HERS II program.*
    i. *Marketing efforts need to inform the homeowners about the contractor-rater team that can deliver the quality of construction and the rebates to support them.*

12. Is there a role for HERS providers and HERS raters in the whole house upgrade programs offered by utility providers or in financing offerings supported by public dollars?

    a. *Providers add value to the program by not only training and tracking Rater performance, but even more to the point is the fact that the Provider can provide data across the state that tracks BUILDING performance before and after the upgrades. The Providers can also track finance, construction costs and energy savings to provide existing information and predictive capability.*
    b. *IF the Raters are included routinely in the EUC Programs, the Provider can help ensure integrity and quality of the EUC Programs by focused training in support of the rebate programs, direct QA on the Rater and the retrofit simultaneously, and recording the data for program use. The Registry will have statewide data, so any IOU can get at data that will help them do their EM&V.*
    c. *Integrating the rating and the Rater performance through the use of a registry will bring understanding and will help dispel confusion. The rater can integrate their work with contractors and can even be "first touch" and provide opportunity for contractors to make a sale.*

13. What improvements could be made to the California HERS program and its use in utility whole house upgrade programs?

a. *Improve the software user interface.*
b. *Field mentoring of Raters and Contractors together so that they can work as a single unit.*
c. *Mandate accredited, uniform and standardized training that helps ensure uniform results statewide, similar to the DOE/NREL efforts to standardize the Home Energy Professional workforce nationwide. The CalCERTS Accredited Program is one example of this approach to standardizing the workforce.*
d. *Include combustion health and safety training as a requirement for a California Whole House HERS Rater.*
e. *The HERS program is a statewide program that is not subject to regional markets, but the EUC works regionally. An Accredited Program that is delivered statewide can unite the CEC's HERS Program, and IOU's rebate programs under one reliable standard of delivery and results. The Provider registry allows the storage of the data into one location, accessible to all stakeholders regardless of region or service territory.*

18. What lessons learned from the San Diego multifamily whole building pilot should be extended into a statewide program? What issues need to be addressed?

a. *The training, as it stands now needs to be expanded.*
b. *There also needs to be Regulations developed that support multifamily issues that are not yet completed.*
c. *Continue work with the HERCCMF committee and other actors who were involved.*

20. What are the major barriers to accomplishing comprehensive data collection and centralized public access to market data?

a. *Acceptance of the value of a Whole House Rating which provides the comprehensive data needed, plus adds the benefit of a Rating Score.*
b. *The IOU's, the Contractors, the consumer and the regulators all need to support the value of a Whole House Rating.*
c. *The Whole House Rating is the only standardized method of acquiring comprehensive data, albeit more mentoring and closer cooperation between the market actors would be helpful in providing the data consistently statewide.*
d. *"Centralized public access to market data could be made available through a data registry but would require outreach to the public."*

21. What safeguards exist for protecting consumer information while still allowing access to data?

a. *The data can be redacted within the data structure to protect individual's personal information.*
b. *The data can be protected in transmission and in stasis with properly secured and monitored databases, and can be accessed via a web server-type structure.*
c. *Registries such as the CalCERTS data registry are already highly secured, monitored and backed up to provide maximum security for data.*

24. How can energy performance tools be used successfully in the multitude of nonresidential business markets in the state? Can these tools be cost-effectively deployed in small and medium buildings?

a. *There needs to be a study to determine what size buildings can be done with existing tools and software. For instance, small non-residential buildings act substantially like similarly sized or configured single-family residences. But as the buildings get larger, they are much more different from smaller buildings. Energy performance tools currently in use are probably adequate for these smaller buildings.*
b. *The cut-off between "Small" and "Medium" buildings needs to be defined.*

25. What is the proper role of public and ratepayer funded programs to increase the access to, and penetration of, energy performance tools for nonresidential buildings?

a. *For medium buildings, there might be tool-lending libraries for larger, more expensive equipment. Such a lending facility would need to be capable of providing training and mentoring for proper use of such equipment.*

26. Is it appropriate to require performance ratings for all nonresidential buildings sometime in the future? Should building performance ratings be publicly disclosed?

a. *It is important to classify all energy using structures in order to help reach the goals of the reduction in power plant construction and oil independence. There is no solid argument as to why a non-residential building should be treated any differently than residential buildings with respect to whether or not they should be rated.*
b. *Public disclosure can certainly be required on public buildings and this will help in such a way as to help provide value acceptance of the rating scores for all buildings.*

33. What is the proper role for regulations to achieve energy efficiency through AB 758? What are the appropriate points in the life of buildings (trigger points) where regulations could be applied?

a. *According to the McKinsey Report, there is no one simple solution. The report supports the concept that many solutions will be required:*
    a. *"Information and Education: Increasing awareness of energy use and knowledge about specific energy saving opportunities enables end users to act more swiftly in their own economic interest;"*
    b. *"Incentives and Financing: Given the large upfront investment needed to capture efficiency potential, various approaches could reduce financial hurdles;"*
    c. *"Codes and Standards: In some clusters of efficiency potential, some form of mandate may be warranted to expedite the process of capturing the potential, particularly where end user or manufacturer attention are low. Options include mandatory audits and/or assessments, equipment standards, and building codes, including improving code enforcement;"*
    d. *"Third Party Involvement": (paraphrasing) A Third party buys the energy efficiency improvements for the end user, which removes all but the financial barriers. However, some end users will still not follow through with the efficiency upgrade. (This is essentially saying that someone else makes the irritation of the EUC go away for the homeowner.)*

35. Should non-energy benefits (NEBs) be recognized in cost-effectiveness criteria for an upgrade program, and if so, how?

a. *Since the original concept of "house as a system" came to the attention of the market, there has been a steady pressure to migrate from energy considerations only to a more holistic approach to building assessments in the HERS programs. This is a natural progression and should be part of the overall retrofit process. A building owner who is uncomfortable or feels their health is at risk will do something to mitigate the problems. This is a primary incentive for the building owner to have a fully competent assessment including scope of work, and estimated costs provided. To address the cost effectiveness of a NEB, there must be a broader approach to "cost effectiveness". Currently "cost effectiveness" is calculated measure-by-measure, but there should also be an analysis of the overall program that addresses the program's ability to stimulate actual jobs being done. If NEB's help this stimulus, then they should be accounted as such. Marketing efforts could be focused on NEB's just to stimulate owners to seek upgrade or retrofit services. This could be combined, possibly with requirements that Contractors (by regulation) must include informational materials to the homeowner when permitted jobs are performed. Much like the lead paint information is required to be delivered to consumers. Are there important distinctions between ratepayer-funded and other publicly funded upgrade programs in how NEBs are addressed?*

36. What process improvements or funding solutions would facilitate better compliance with the Building Energy Efficiency Standards? What actions could be taken to encourage contractors to pull permits?

a. *Process improvements to comply with permit acquisitions need to be made convenient and easy to do, without encumbering jurisdictional requirements. There are several market actors in the Rating and Provider communities who are ready to step up and implement possible solutions. CALBO and other entities in the building inspection business should be part of the solution so the chances of success are as high as possible. Regulation might be needed here, but should be done as a last resort. Kiosk systems, software solutions, online permitting, and several other innovations are being discussed by interested parties and committees around the state.*

37. How should building energy simulation software be used to make recommendations for energy upgrades? How could actual energy use, before and after the upgrade, be considered?

a. *The question is not "how should it be used?", the question is "how can it be improved, streamlined and made more user-friendly?"*
b. *By tying SMART meter data to the initial HERS rating and simulation results, and then examining the usage through the SMART meter over time.*

38. Should California pursue a "HERS-lite" rating option (see page 65 of AB 758 Scoping Report)? Could this be used as a screening tool? How could it be used?

a. *NO, as stated in the Scoping Report, the "HEScore" is not actually a HERS Lite…the HEScore establishes a comparison between an individual house, and a population of houses. Furthermore, it is working on source energy, not TDV. The HEScore is thus a <u>comparative</u> analysis, rather than an <u>absolute</u> analysis. These two concepts are not the same thing in different degrees. They are completely different, unrelated concepts.*
b. *It is not clear why a HERS Lite "comparison" would be more useful to the homeowner than knowing how his own house is performing. HERS Lite is like going to a doctor and paying less for the appointment to find out if you are sicker or healthier than the last patient who the doctor saw, but not finding out if you are sick, or how you could be healthier.*
c. *Finally, the HERS Lite method does not speak to <u>what</u> the house needs, or <u>how much it will cost</u> or how much money and energy it will <u>save</u> the owner.*

39. How effective are workforce training efforts to prepare building officials, experienced contractors and new workforce entrants for energy upgrade programs?

a. *In today's existing industry there are no programs that address training efforts for building officials per se. CalCERTS has developed a training program to help building officials understand the HERS Rater industry and could offer EUC training as well. We encourage all building officials to engage in this type training to help advance their skills and promote the program.*

b. *We feel that the contractors, raters and new workforce entrants must go through a standardized and accredited training program such as NREL's four home energy professionals' credentials. The CalCERTS ANSI-IREC Accredited Program is one example of this approach to standardizing the Energy Efficiency Workforce.*

What education or training gaps exist?

a. *There are many items of which the workforce is lacking: technical training, sales and marketing, business management training, estimating, contract development, basic business skills, interpersonal skills, etc.*